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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,554	07/27/2001	Tae-jin Lee	Q63310	7393

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EXAMINER	
LEE, JOHN J	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/915,554	LEE ET AL.	
	Examiner	Art Unit	
	JOHN J. LEE	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-9,11-16 and 19-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-9,11-16,19,21-25 and 30* is/are rejected.

7)☒ Claim(s) *20 and 26-29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. **Claim 23 is objected** to because of the following informalities: the limitation "the a total number" in claim 2 should be changed to "a total number". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-5, 7-9, 11-16, 19, 21-25, and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vook et al. (US patent number 5,583,866) in view of Omi et al. (US Patent number 6,940,831).

Regarding **claims 1 and 8**, Vook discloses that a wireless communication apparatus (Fig. 1) for performing a wireless communication (Fig. 1 and column 3, lines 53 – column 4, lines 9). Vook teaches that a transceiving unit (14 in Fig. 1) for receiving and transmitting data externally (abstract, column 3, lines 53 – column 4, lines 36, and Fig. 1), the transceiving unit (14 in Fig. 1) maintaining a link to at least one slave device (12 in Fig. 1) (column 4, lines 10 – 45 and Fig. 1) and providing a requested priority to the at least one slave device (column 14, lines 13 – column 15, lines 4 and Fig. Fig. 10, where teaches the central controller unit transmits and receives data and keeping a link to at least one slave device (user device), and the central controller unit (master device)

provides determining high priority and low priority for each slave devices), when the wireless communication apparatus is operated as a master (Fig. 2, column 6, lines 24 – 52, and abstract, where teaches one of the user devices operates as a master device). Vook teaches that a controller (14 in Fig. 1) for determining a priority of the at least one slave device considering the requested priority (column 14, lines 60 – column 15, lines 4, Fig. Fig. 10, and column 15, lines 66 – column 16, lines 36, where teaches master device determines priority of the slave device (source user device) as the slave device wishes to transmit than other devices), determining a frequency of communication according to the priority of the at least one slave device (column 7, lines 34 – column 8, lines 30 and Fig. 3, where teaches each master station (access point) has available frequencies and device can tune to selected channel frequency) and controlling the communication with the at least one slave device (column 7, lines 34 – column 8, lines 30 and Fig. 3, where teaches master station selects a channel of communication by priority and controlling the communication with the slave station).

Vook does not specifically disclose the limitation "receiving a requested priority according to the amount of data to be transmitted to the master device from the at least one slave device and a memory for storing the frequency of communication of the at least one slave device". However, Omi discloses the limitation "receiving a requested priority according to the amount of data to be transmitted to the master device from the at least one slave device and a memory for storing the frequency of communication of the at least one slave device" (column 3, lines 13 – column 4, lines 62, Fig. 15, 19, and column 8, lines 20 - 64, where teaches the master device receives a request priority according to

data amount from the slave device and determines whether assigning or not, and the slave device has a memory, buffer for storing the received data (frequency) information). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Vook system as taught by Omi. The motivation does so would be to achieve an enhancing controlling data channel/frequency allocation by priority transmission service and improving communication reliability in wireless communication system.

Regarding **claims 2 and 14**, Vook discloses that the frequency of communication increases as the priority increases (column 16, lines 12 – 64 and Fig. 6, 8, where teaches adjustable the priority according to amount of frequency communication).

Regarding **claims 3, 11, and 16**, Vook does not specifically disclose the limitation "the controller assigns a priority lower than the requested priority when the requested priority is not allowable to the at least one slave device". However, Omi discloses the limitation "the controller assigns a priority lower than the requested priority when the requested priority is not allowable to the at least one slave device" (column 3, lines 13 – column 4, lines 62, Fig. 15, 19, where teaches the master device calculates priority value by subtracting overhead bandwidth, and the priority value is not less than a predetermined value as the communication link assigned the transmission band). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Vook system as taught by Omi. Doing so would enhance controlling bandwidth allocation and improving data signal adaptability in wireless communication system.

Regarding **claim 4**, Vook discloses that the controller communicates with the at least one slave device in accordance with the frequency of communication (column 7, lines 34 – column 8, lines 30 and Fig. 3, where teaches the master device communicates slave devices).

Regarding **claims 5 and 13**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 8. Furthermore, Vook further discloses that the controller subtracts one time from the frequency of communication after each communication between the controller and the at least one slave device (column 16, lines 37 – 64 and Fig. 8).

Regarding **claim 7**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 8.

Regarding **claim 9**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 8.

Regarding **claim 12**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 4.

Regarding **claim 15**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 8.

Regarding **claims 19 and 22**, Vook discloses that levels of the priority include high, medium, and low levels (column 14, lines 7 – column 15, lines 22 and Fig. 6, 7, where teaches since priority levels includes lower priority level, inherently has high and medium level).

Regarding **claim 21**, Vook discloses that the memory stores priorities of the slave devices that currently linked (column 14, lines 7 – column 15, lines 22, Fig. 6, 7, and column 9, lines 9 - 45, where teaches the slave device has a memory for storing priority levels and the each slave device is communication linked).

Regarding **claim 23**, Vook discloses that the memory stores a total number of slave device that is currently linked (column 9, lines 1 – column 10, lines 12 and Fig. 1, where teaches the access point maintains currently linked all slave devices and schedules periods of time to transmit the data signal to slave devices).

Regarding **claim 24**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 21. Vook discloses that the memory stores a polling frequency (requesting frequency) of each device that is currently linked (column 14, lines 13 – column 15, lines 4 and Fig. Fig. 10, where teaches the central controller unit transmits and receives data and priority requesting frequency and keeping a link to at least one slave device (user device), and the central controller unit (master device) provides determining high priority and low priority for each slave devices).

Regarding **claim 25**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 21. Vook discloses that slave devices that have a polling frequency greater than zero are sequentially polled according to their priorities (column 14, lines 7 – column 15, lines 22 and Fig. 6, 7, where teaches when master station receives at least one data request from at least one slave device, determines sequentially to their priority).

Regarding **claim 30**, Vook and Omi disclose all the limitation, as discussed in claims 1 and 23.

Allowable Subject Matter

4. Claims 20 and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to disclose "the memory stores a high priority maximum number which is maximum number of slave devices of a high priority, and a medium priority number which is a maximum number of slave devices of a medium priority, and one time is subtracted from the polling frequencies of each slave after the respective slave has been polled" as specified in the claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hong et al. (US Patent number 5,844,900) discloses Optimizing a Medium Access Control Protocol.

Todd et al. (US Patent number 6,359,901) discloses Asynchronous Adaptive Protocol Layer Tuning.

Information regarding...Patent Application Information Retrieval (PAIR) system... at 866-217-9197 (toll-free)."

Any response to this action should be mailed to:

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or faxed (571) 273-8300, (for formal communications intended for entry)

Or: (571) 273-7880 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to USPTO Headquarters, Alexandria, VA.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(571) 272-7880**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, **Nay Aung Maung**, can be reached on **(571) 272-7882**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.

J.L
February 2, 2006

John J Lee

2/3/06
TILAHUN GESESSE
PRIMARY EXAMINER